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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,375

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Bernhard Nebel

14290

8062

Orum & Roth
Suite 1616
53 West Jackson Boulevard
Chicago, IL 60604

7590

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EXAMINER

CHAN, ALLEN

ART UNIT

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4116

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,375	Applicant(s) NEBEL ET AL.	
	Examiner ALLEN CHAN	Art Unit 4116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/23/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In response to the preliminary amendment filed February 28, 2006, wherein applicant amends claims 1-17, claims 18-20 are newly added, and claims 1-20 are currently pending in this application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, it is unclear what is meant by a carriage. The specification only refers to the term once and does not describe its structure or function. Thus, the claim is rendered indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyamoto et al. (US Patent No. 6,176,780 B1).

Regarding claim 1, Miyamoto et al. discloses the device for inputting control signals into a computer and a display unit for displaying a playing field for playing figures arranged in several parallel rows and a ball forming part of a computer-based simulated table soccer game (see Abstract, fig. 1, and col. 4, lines 59-63). The housing (item 2), multiple rods (item 5), openings in the housing for each of the rods, and devices to limit travel attached to the rods (thicker section of rods) are shown in figure 1. Further, Miyamoto et al. discloses the sensor to determine the translation, or position of the rod in an axial direction and the sensor to determine the rotation of each rod (see col. 5, lines 13-25). Lastly, Miyamoto et al. discloses the transferring the data received by the sensors to a computer (see col. 5, lines 25-27).

Regarding claim 2, Miyamoto et al. discloses that a rod is provided for each of the rows of a team of the table soccer game (see fig. 1 and col. 2, lines 60-65).

Regarding claims 3 and 18, Miyamoto et al. discloses four rods positioned next to each other and parallel to each other in the housing, the ends of which protrude from at least one side of the housing (see fig. 1).

Regarding claims 4 and 19, Miyamoto et al. discloses eight rods positioned next to each other and parallel to each other in the housing, with the ends of four rods protruding from one side of the housing and four rods protruding from the opposite side of the housing (see fig. 1).

Regarding claim 6, Miyamoto et al. discloses the use of mechanical sensors for determining the rotation or position of the rods (see col. 5, lines 13-25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 5 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Patent No. 6,176,780 B1) in view of Sanderson et al. (US Patent No. 6,279,906 B1).

Regarding claims 5 and 20, Miyamoto et al. discloses the table soccer game using rods to control the players. However, Miyamoto et al. does not explicitly disclose the use of a brake to slow or block the rotation of a rod, the brake being connected to the computer via an interface, and the brake being actuated by the computer whenever a certain situation arises in the table soccer game. Sanderson et al. discloses a steering wheel game controller with a force-feedback motor that provides resistance to the rotation of the steering wheel that is connected to a motor interface circuit (see col. 6, lines 21-31). Further, Sanderson et al. discloses that the controller system, which includes the motor interface circuit, is connected to a computer (see fig. 5 and col. 7, lines 54-63). It is known that the brake, or force-feedback, would be actuated by the computer. It would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the rod controllers of Miyamoto et al. with the force-feedback motor as taught by Sanderson et al. in order to enhance the sensation of realism to the user (see col. 6, lines 28-31).

9. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Patent No. 6,176,780 B1) in view of Reeves (US Patent No. 5,436,640).

Regarding claim 7, Miyamoto et al. discloses the input device for a table soccer game having sensors as discussed above. However, Miyamoto et al. does not explicitly disclose that potentiometers are provided as sensors. Reeves discloses the use of potentiometers as sensors in a controller for video simulation system (see col. 2, lines 53-56). It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the sensors of Miyamoto et al. with the potentiometers of Reeves because both elements achieve the same function, which is to detect the rotation and translation of the game controllers.

Regarding claim 8, Reeves discloses a gearing system coupled to each of the potentiometers (see col. 2, line 66 through col. 3, line 4).

Regarding claim 9, Reeves discloses a gearing system including a first gear and a second gear for engaging the first gear, which is provided on the potentiometer for determining the rotation (see col. 3, lines 10-22).

Regarding claims 10 and 11, it is unclear what a carriage is, thus the examiner interprets a carriage to be an element for holding or securing other elements in a particular place. Reeves discloses a mounting bracket with an attached gear and connected to a potentiometer (see col. 3, lines 10-19). It is obvious that the potentiometers can be used to determine translation or rotation. The non-displaceable gear rack is also taught by the mounting bracket with a gear, where the first gear engages the mounted or fixed gear (see col. 3, lines 10-19). It is obvious that the placement of the gear rack does not alter the functionality of the device.

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10. Claims 12-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Patent No. 6,176,780 B1) in view of Davis et al. (US Patent No. 5,807,175).

Regarding claim 12, Miyamoto et al. discloses the input device for a table soccer game having sensors as discussed above. However, Miyamoto et al. does not explicitly disclose that optical distance measuring devices are used as the sensors. Davis et al. discloses the use of optical sensors in a game controller, where the optical sensors detect the position of a control stick. Further, Davis et al. also discloses that a microprocessor within the controller serves as a transmitting device (see col. 2, lines 3-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the table soccer game of Miyamoto et al. and the optical sensors of Davis et al. because the use of optical sensors with video game controllers is well-known. The combination would have yielded predictable results since both the mechanical and optical sensors are used to detect the rotation and translation of the controller.

Regarding claim 13, Davis et al. discloses that the controller is capable of determining the positioning and rotational orientation through the use of optical sensors (see col. 2, lines 5-17).

Regarding claim 14, Davis et al. discloses the optical distance measuring devices used in a game controller as discussed above. It is known that the optical sensors are capable of performing the function of determining the rotation of a rod and that the orientation of the parts within the device will not alter the function of the optical sensor.

Regarding claim 16, Davis et al. discloses an optical position detection circuit that feature at least one light source and at least one optical sensor (see col. 2, lines 3-10).

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Patent No. 6,176,780 B1) in view of Hillman (US Publication No. 2002/0082064), further in view of Kim et al. (US Patent No. 4,575,086).

Regarding claim 15, Miyamoto et al. discloses the input device for a table soccer game having sensors as discussed above. However, Miyamoto et al. does not explicitly disclose that freely rotating trackballs are used in the table soccer game. Hillman discloses the use of trackballs in a table soccer game (see fig. 1 and par. [0016]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided trackballs in the table soccer game of Miyamoto et al., as taught by Hillman, in order to “permit movement in directions through 360°” (see [par. 0016]). However, the combination of Miyamoto et al. and Hillman does not disclose the trackball with rollers and perforated disks, where light-emitting diodes and sensors are provided on the perforated disks to detect pulses of light from the diodes. Kim et al. discloses the trackball with multiple rollers (see fig. 1 and col. 2, lines 45-52), where light-emitting diodes and sensors are provided on the perforated disks to detect pulses of light from the diodes (see col. 3, lines 17-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the table soccer game of Miyamoto et al. and Hillman, with the rollers, perforated disks, and light-emitting diodes of Kim et al. because it is simply applying the known technique

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of using trackballs and optical sensors to detect movement with the known device of a table soccer game. This would yield predictable results in that the table soccer game does not achieve any new functionality, but rather the method or technique of controlling the players has changed.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Patent No. 6,176,780 B1) in view of Davis et al. (US Patent No. 5,807,175), further in view of Yokoyama et al. (US Patent No. 6,484,942 B1).

Regarding claim 17, the combination of Miyamoto et al. and Davis et al. disclose all elements of the claimed invention except for the bar pattern. It is well known in the art to use bar patterns or barcodes with optical sensors, as evidenced by Yokoyama et al. (see col. 1, lines 26-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the table soccer game of Miyamoto et al. and Davis et al. with the barcodes of Yokoyama et al., in order to have an alternate method of determining the rotational speed of the rod.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mashkabov (US 2002/0125633 A1) discloses a table soccer game.

Marcus et al. (US 5,643,087) discloses an input device for video games using potentiometers.

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Rosenberg et al. (US 6,271,828 B1) discloses an input device using optical sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN CHAN whose telephone number is (571)270-5529. The examiner can normally be reached on Monday through Thursday 8:00 AM to 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe H. Cheng can be reached on (571) 272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN CHAN/
Examiner, Art Unit 4116
8/11/2008

/Anu Ramana/
Primary Examiner, Art Unit 3733